

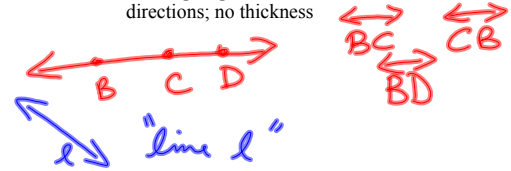
Chapter 1 Essentials of Geometry

1-1 Identify Points, Lines, and Planes

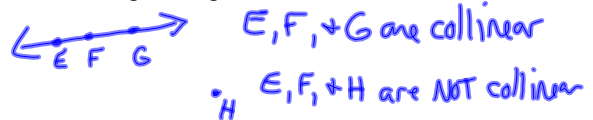
point location; no dimension; no thickness



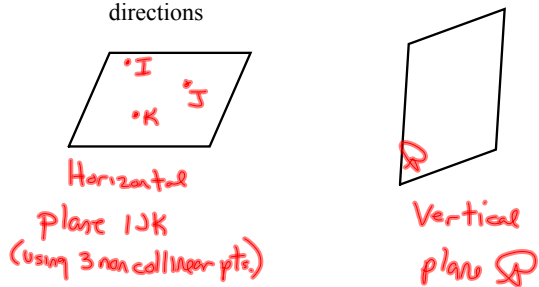
line made up of points; two dimensions; infinite in both directions; no thickness



collinear points--points on the same line



plane flat surface; two dimensions; infinite in all directions

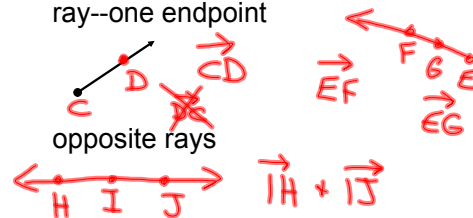


coplanar points-- points on the same plane

line segment--has 2 endpoints

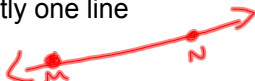


ray--one endpoint



intersection--set of points that the figures have in common

(from 2.4)
Postulate 5--through any 2 points, there exists exactly one line



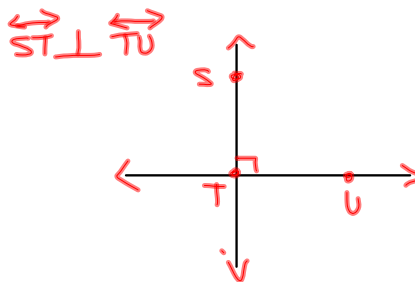
Postulate 6--A line contains at least 2 points



Postulate 7--If 2 lines intersect, then their intersection is exactly one point

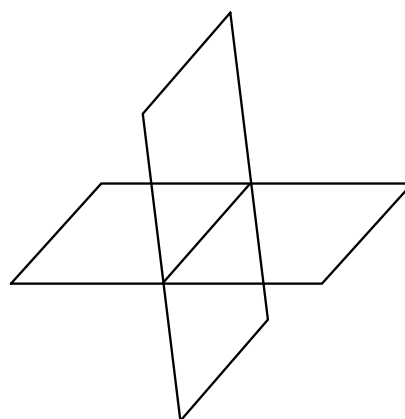
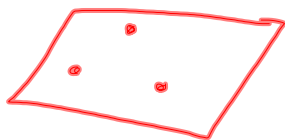


perpendicular lines--2 lines that intersect to form a right angle



Postulate 8--Through any 3 noncollinear points there exists exactly one plane

Postulate 9--A plane contains at least 3 noncollinear points



Postulate 10--If 2 points lie in a plane, then the line containing them lies in that plane



Space -- the set of all points

Postulate 11--If 2 planes intersect, then their intersection is a line



True or False

1. C and D are collinear.
2. \overline{XB} lies in plane X .
3. Points A , C , and X are coplanar.
4. \overline{AD} lies in plane J .
5. X and Y are collinear.
6. Points Y , D , and C are coplanar.

